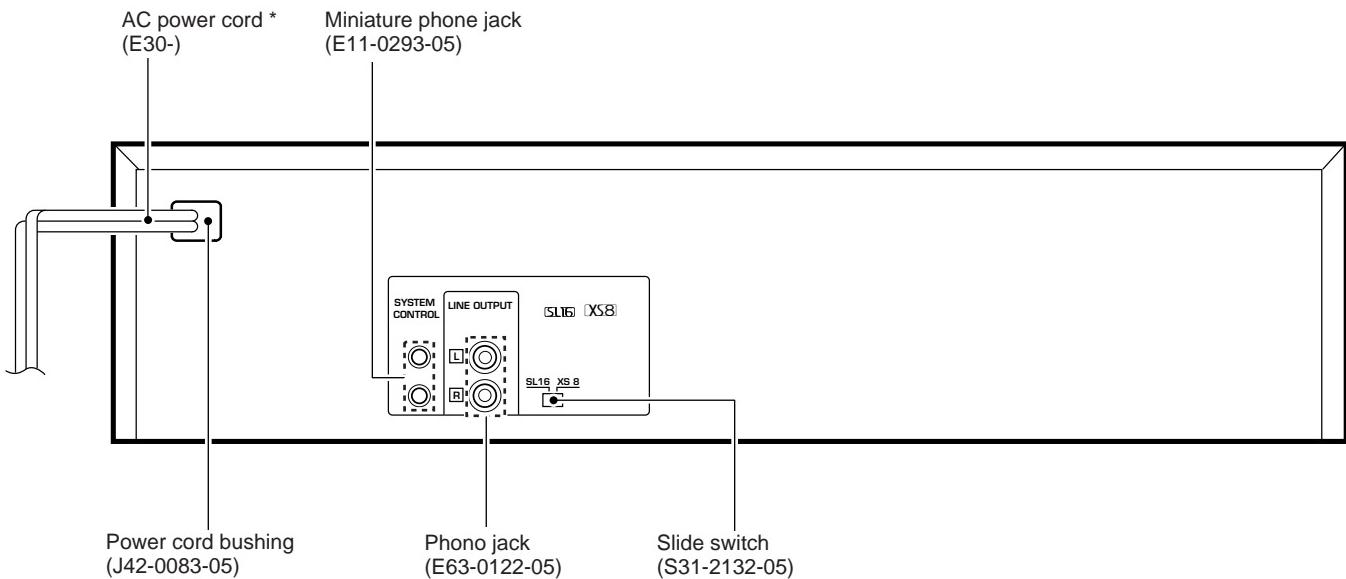
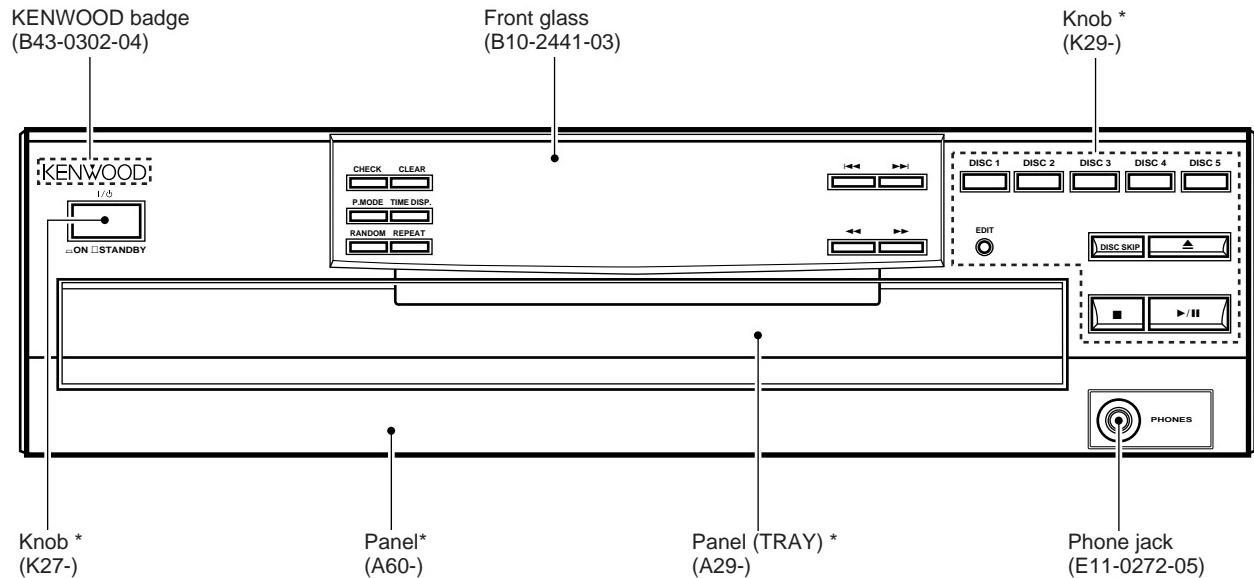


MULTIPLE CD PLAYER  
**CD-203/DPF-R3010/DPF-R3010E**  
**CD-204/DPF-R4010/DPF-R4010E**  
 SERVICE MANUAL

KENWOOD

© 1998-3/B51-5417-00 (K/K) 3430



Illust is CD-204/DPF-R4010/DPF-R4010E.  
 \* Refer to parts list on page 16.

In compliance with Federal Regulations, following are reproductions of labels on, or inside the product relating to laser product safety.

Refer to **103CD/104CD/1050CD, DP-R797/R3090/R4090 (B51-5269-00)** if you require circuit description and block diagram in detail.

KENWOOD-Corp. certifies this equipment conforms to DHHS Regulations No. 21 DFR 1040. 10, Chapter 1, Subchapter J.

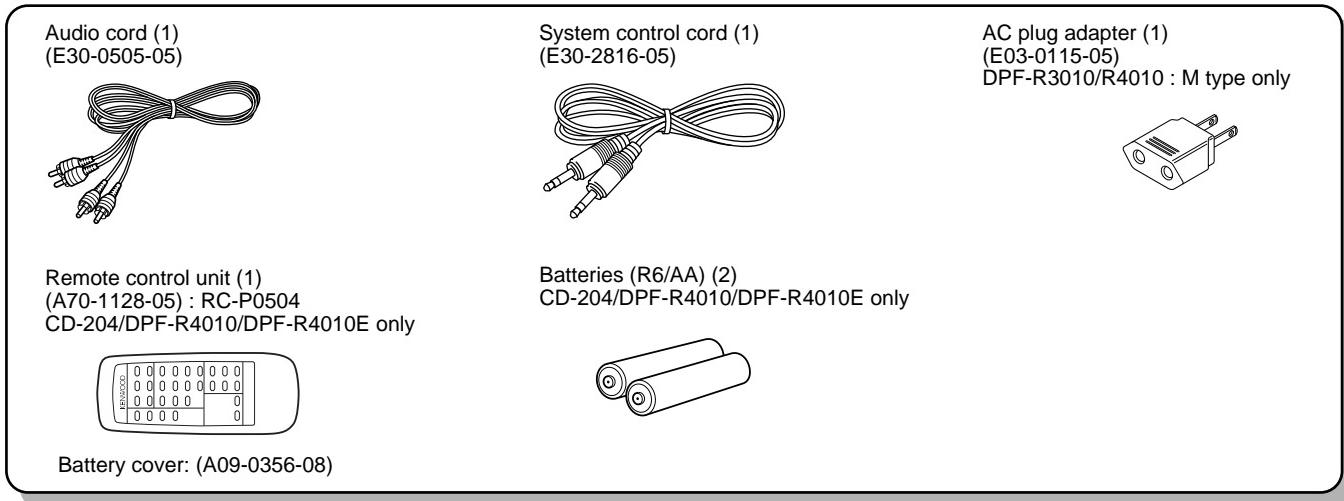
**DANGER : Laser radiation when open and interlock defeated.**  
**AVOID DIRECT EXPOSURE TO BEAM**

# CONTENTS / ACCESSORIES

## Contents

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## Accessories



### **HOW TO READ THE PARTS LIST**

### **ABBREVIATION OF MODEL AND MASS PRODUCTION'S DESTINATIONS**

MODEL	ABB.	Australia	Canada	China	England	Europe	Germany	Korea	Malaysia
CD-203	-	-	P3	-	-	-	-	-	-
DPF-R3010	-	X3	-	-	T3	E3	-	-	-
DPF-R3010E	-	-	-	-	-	E4	-	-	-
CD-204	-	-	P1	-	-	-	-	-	-
DPF-R4010	-	X1	-	-	T1	E1	-	-	-
DPF-R4010E	-	-	-	-	-	E2	-	-	-
MODEL	ABB.	Mexico	PX/AAFES	Russia	Scandinavia	Shanghai	USA	Other area	
CD-203	-	-	-	-	-	-	K3	-	-
DPF-R3010	-	-	Y3	-	-	-	-	M3	-
DPF-R3010E	-	-	-	-	-	-	-	-	-
CD-204	-	-	-	-	-	-	K1	-	-
DPF-R4010	-	-	Y1	-	-	-	-	M1	-
DPF-R4010E	-	-	-	-	-	-	-	-	-

# CD-203/204/DPF-R3010/R3010E/R4010/R4010E

## CIRCUIT DESCRIPTION

### 1. Pin description

Pin No.	Name	I/O	Function
1~7	7G~1G	O	Display digit control (Grid7~Grid1)
8	VDD		Power supply (+5V)
9	SQCK	O	Q data reading clock output
10	NC	O	Unused
11	SUBQ	I	Q data input
12~15	KR3~KR0	I	Key return 3~0
16	NC	I	Unused
17	RESET	I	Reset input
18	SLT SW	I	CDM25 start limit switch input
19	DOWN SW	I	CDM25 mechanism down switch input
20	AVSS	I	Unused (connected to VSS)
21	UP SW	I	CDM25 mechanism up switch input
22	CLOSE SW	I	CDM25 close switch input
23	OPEN SW	I	CDM25 open switch input
24	OPEN M	O	Open motor control
25	CLOSE M	O	Close motor control
26	RTRAY R	O	Rotary tray motor control (CW)
27	RTRAY L	O	Rotary tray motor control (CCW)
28	RTRAY S	O	Rotary tray motor control (deceleration)
29	AVDD		Unused (connected to VDD)
30	AVREF		Unused (connected to VSS)
31	NC	I	Unused
32	XT2		Unused (OPEN)
33	VSS		GND
34	X1	I	System clock input
35	X2		Unused
36	DSENSE	I	CDM25 disc sensor detection
37	PSENSE	I	CDM25 position sensor detection
38	LDC	O	Laser signal output
39	FOK	I	FOK signal input
40	D.R.I.V.E	I	Unused
41	SERIAL SW	I	Serial communication 8 (XS8)/16(SL16) bit changover
42	SDATA	I/O	System serial data signal input output
43	BUSY	I/O	System serial busy signal input output
44	SCOR	I	Sub code frame sync detection
45	MON	O	Focus drug countermeasure circuit control
46	MUTG	O	Digital mute control
47	REM	I	Remote control signal input
48	VPP		GND
49	SENSE	I	Sense input from CXD2507AQ
50	DTA	O	Data output for CXD2507AQ
51	CLK	O	Clock output for CXD2507AQ
52	VDD		Power supply (+5V)
53,54	DEFECT SEL./NC	I	Unused
55	LAT	O	Latch output for CXD2507AQ
56	GFS	I	Frame signal input
57	RMUTE	O	Analog mute control
58	MDT	O	Attenuater data output
59	MCK	O	Attenuater clock output
60	MEL	O	Attenuater latch output
61~70	Sp~Sg/KS	O	Display segment control (Seg p-Seg g) / Key scan
71	VLOAD		Display drive negative power supply (-35V)
72~77	Sf~Sa/KS	O	Display segment control (Seg f-Seg a) / Key scan
78~80	10G~8G	O	Display digit control (Grid10-Grid8)

# CIRCUIT DESCRIPTION

## 2. Test mode

### 2-1. Setting the test mode

- The microprocessor built in the unit can be put to TEST MODE by just pressing the TIME DISP. key when set to power on.
- DP-R series is available to set to each test mode by each key.

### 2-2. Key vs Function in test mode

Step	Key name	Display	Description		
1	PLAY/PAUSE (Cyclic)	03	(1) Focus servo .....	ON	TE-B adjustment
			(2) Tracking servo .....	OFF	
			(3) Feed servo .....	OFF	
		05	(1) Focus servo .....	ON	F-GAIN/T-GAIN FE-B adjustment
			(2) Tracking servo .....	ON	
			(3) Feed servo .....	ON	
2	UP		Display goes on		
3	DOWN		Display goes off		
4	DISC1		Search the position of No. 1		
5	STOP	00	(1) Focus servo .....	OFF	Waiting key input
			(2) Tracking servo .....	OFF	
			(3) Feed servo .....	OFF	
6	DISC2	-	Canceled Test mode		Normal mode
7	DISC3	01	Canceled Test mode, then 01 PLAY		Normal mode

## ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	PLAYER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
<b>Open the tray (Normal mode), then turn the power off.</b>							
1	LASER POWER	–	Apply the sensor section of optical power meter on the pickup lens.	While pressing the TIME DISP. key, turn the AC ON. (Test mode) Press the PLAY/PAUSE key, then confirm that the display is "03".	–	On the power from 0.08 to 0.15 mW, when the diffraction grating is correctly aligned with the RF level of 1.0 Vp-p or more.	(a)
1. Press the STOP key. 2. Press the OPEN key. 3. Load a disc, then press the CLOSE key. 4. Press the PLAY key. 5. Press the OPEN key to open the tray. 6. Turn the power off. (Player stops as the tray is opened while the disc clamped.) 7. While pressing the TIME DISP. key, turn the power ON to enter the Test mode.							
2	TRACKING ERROR BALANCE	Test disc Type 4	Connect an oscilloscope as follows. CH1 : RF (CN2 pin 1) CH2 : TE1 (CN2 pin 6)	Press the PLAY/PAUSE key, then confirm that the display is "03".	TE BALANCE VR2	Symmetry between upper and lower patterns	
3	FOCUS ERROR BALANCE	Test disc Type 4	Connect an oscilloscope as follows. CH1 : RF (CN2 pin 1) CH2 : TE1 (CN2 pin 6)	Press the PLAY/PAUSE key, then confirm that the display is "05".	FE BALANCE VR1	Optimum eye pattern	
4	TRACKING GAIN	Test disc Type 4 Apply signal of 1.2 kHz, 50mVrms to CN2 pin 5-6.	Connect a LPF to CN2 pin 5-6 to which you connect an oscilloscope or AC voltmeters.	Press the PLAY/PAUSE key, then confirm that the display is "05".	TRACKING GAIN VR3	Two VTVMs should read the same value.	(e)

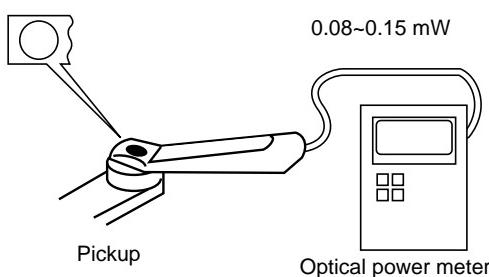
Note:

Type 4 disc : SONY YEDS-18 Test Disc or equivalent.

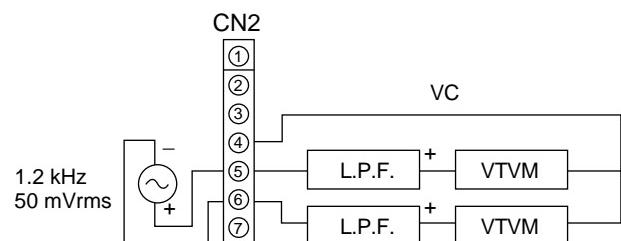
LPF: Around 47 kΩ+ 390 pF or so.

Step 1~4 are in Test Mode.

(a) Laser power



(e) Tracking gain



A

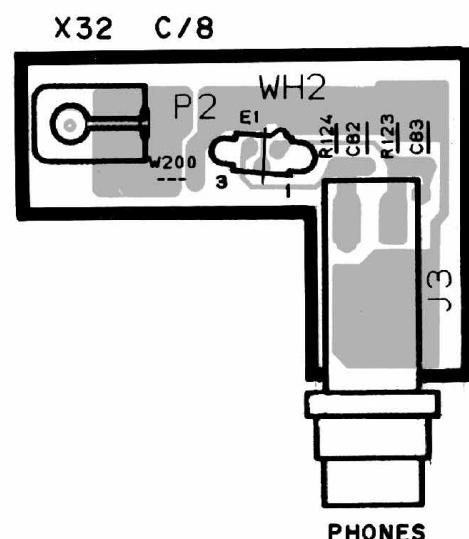
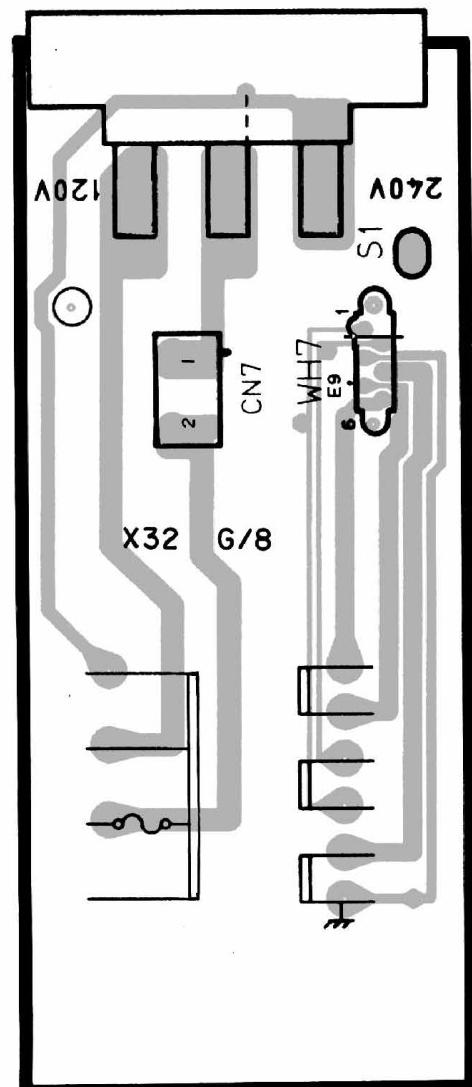
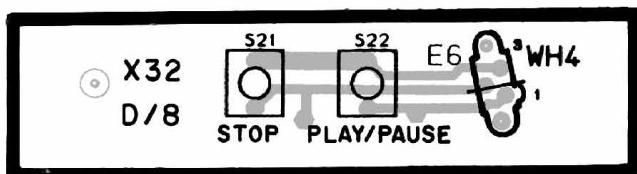
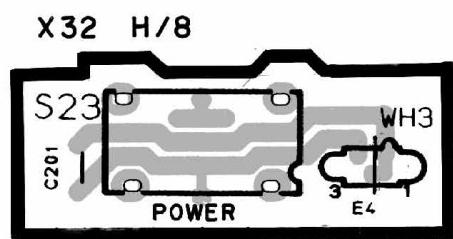
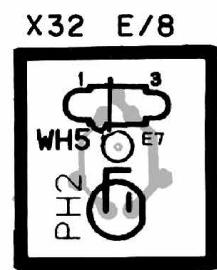
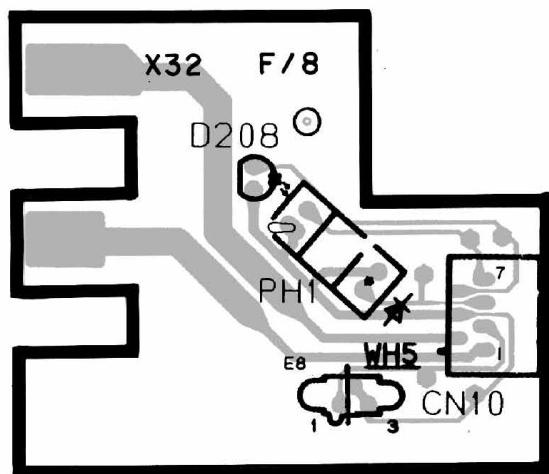
B

C

D

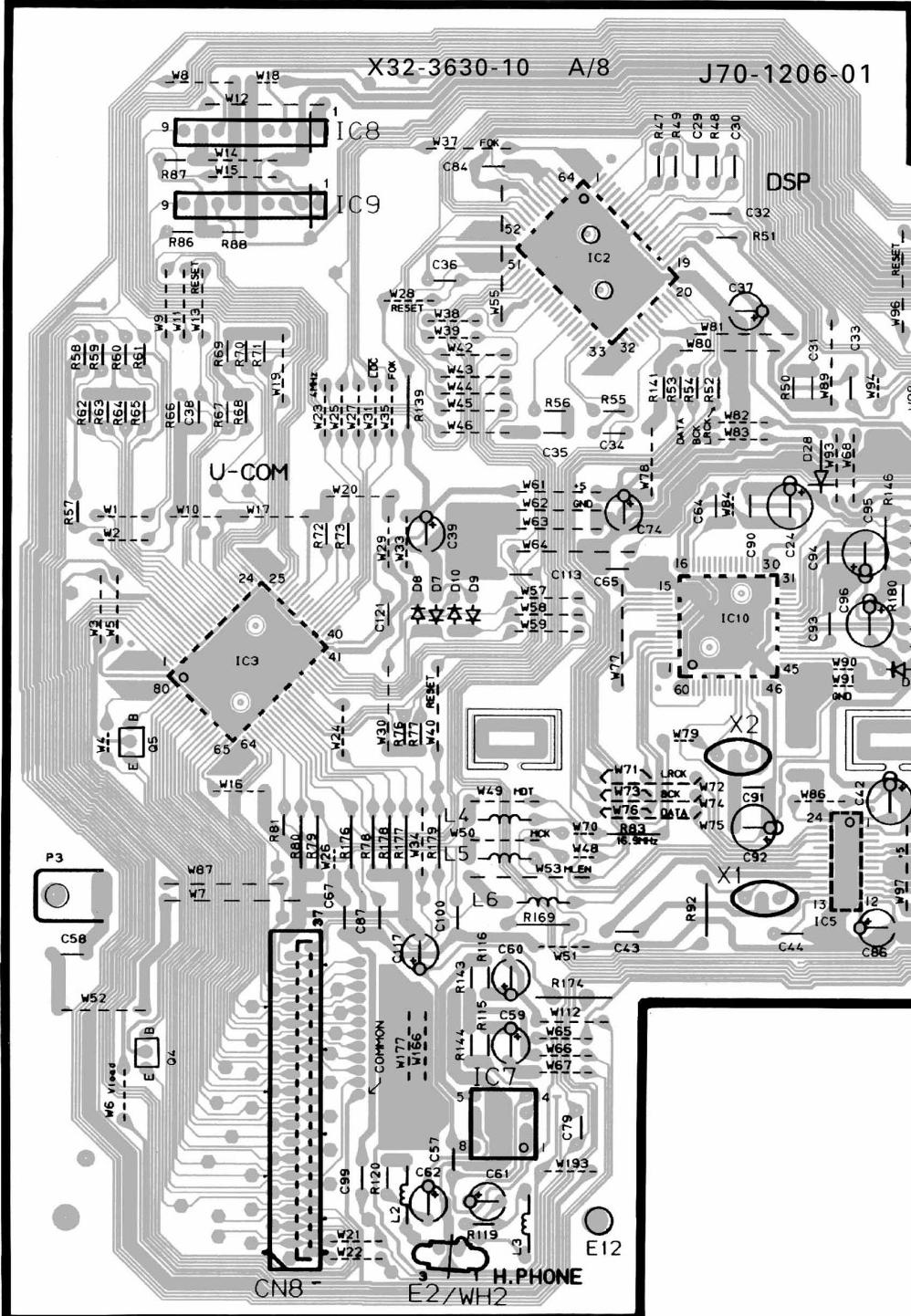
E

# PC BOARD (Component side view)



Refer to the schematic diagram for the value of resistors and capacitors.

# PC BOARD(Component side view)



X32-363X-XX

0-10 : CD-204 (K,P)

0-11 : CD-203 (K,P)

0-21 : DPF-R4010 (Y,M)

0-22 : DPF-R3010 (Y,M)

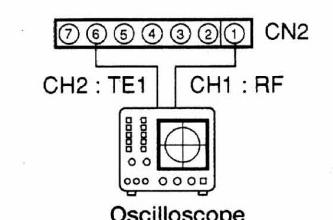
2-71 : DPF-R4010 (X,T,E)

DPF-R4010E (E2)

2-72 : DPF-R3010 (X,T,E)

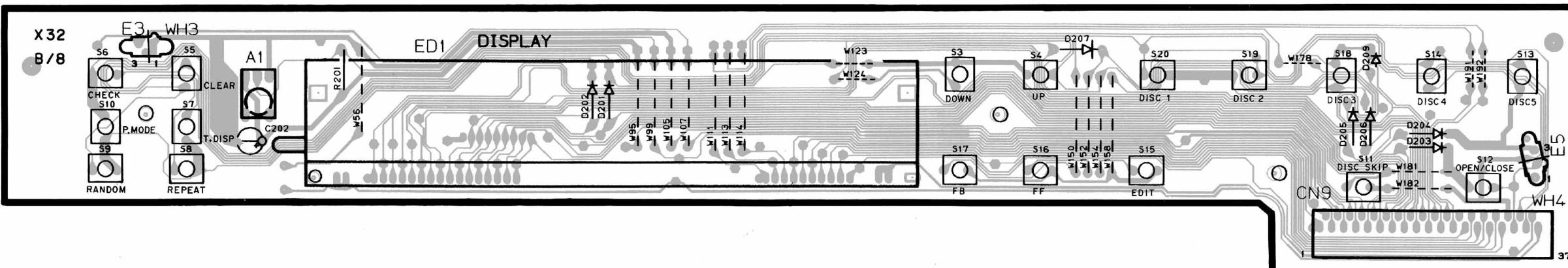
DPF-R3010E (E2)

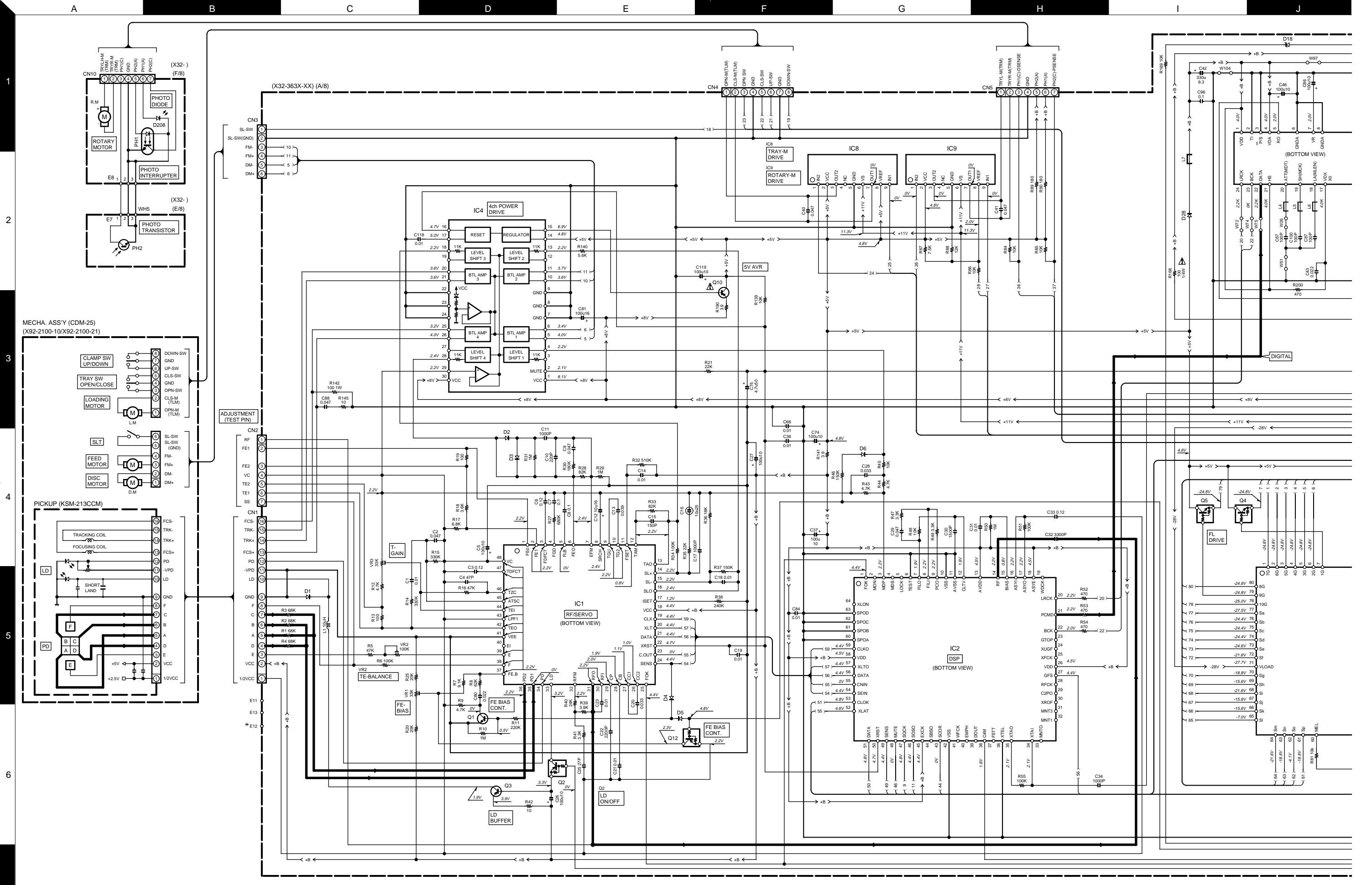
- (c) Tracking error balance : Symmetry between upper and lower patterns.  
 (b or d) Focus error balance : Optimum eye pattern.

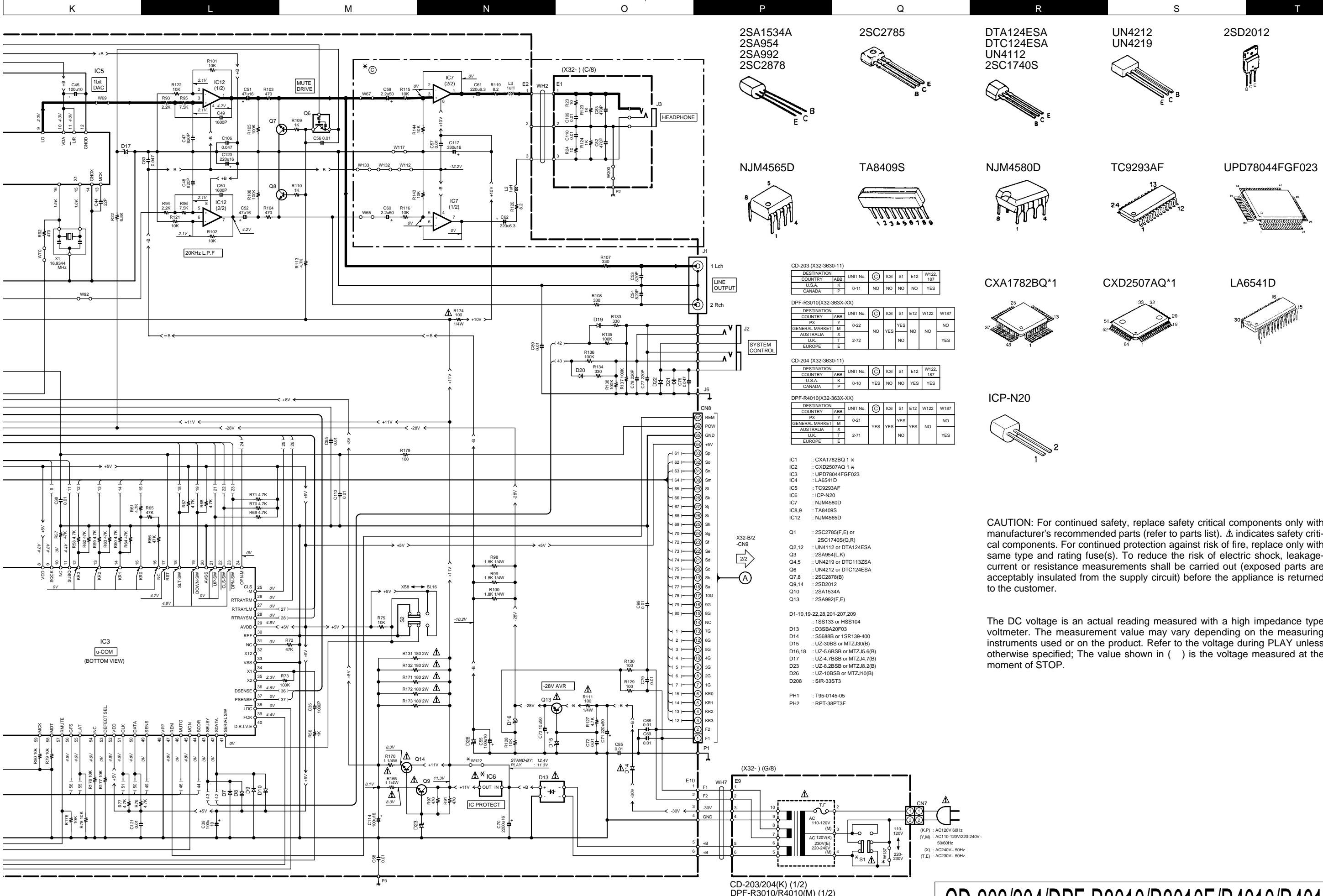


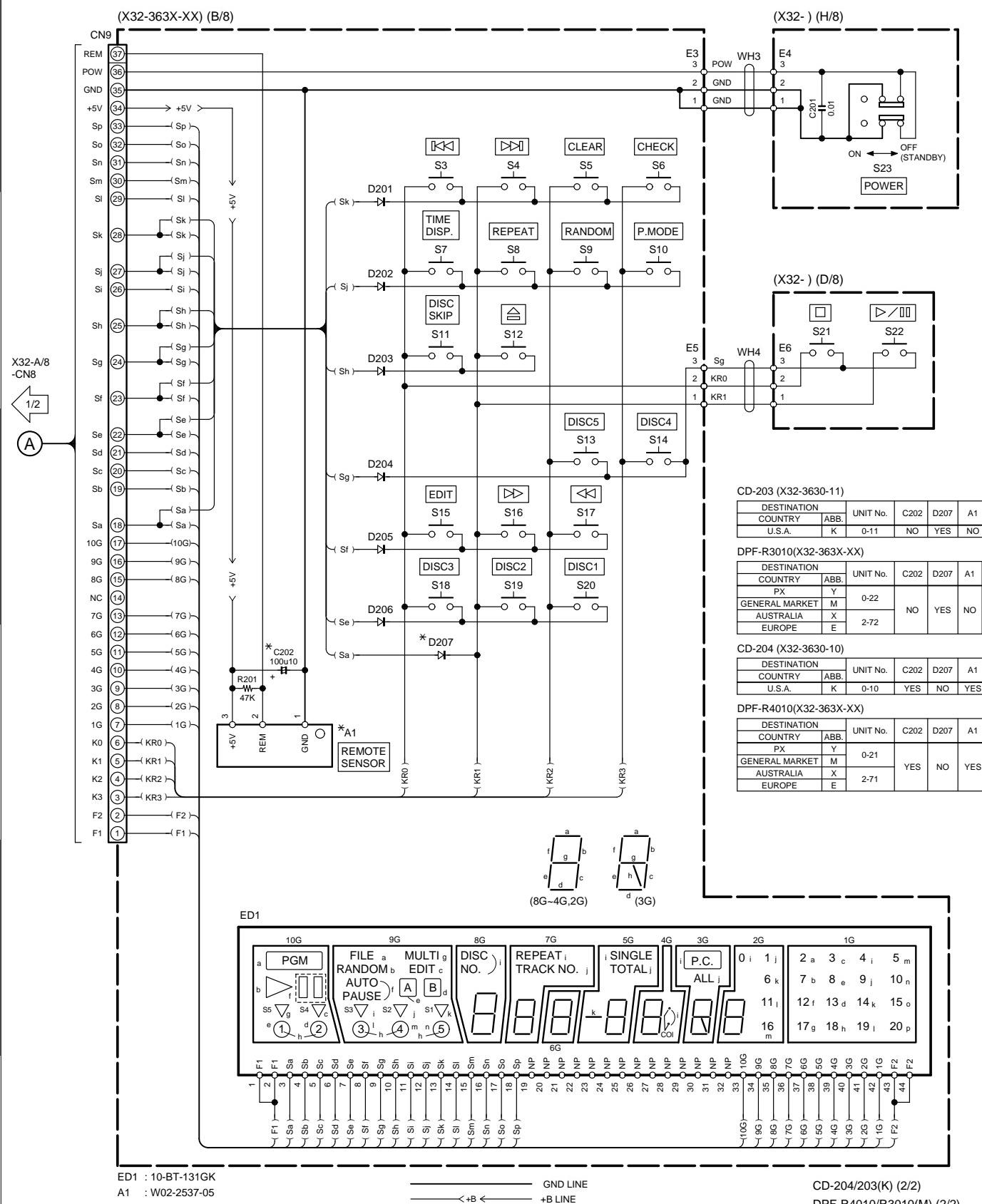
(e) Tracking gain :  
 Two VTVMs should read the same value.

1.2kHz  
 50mVrms









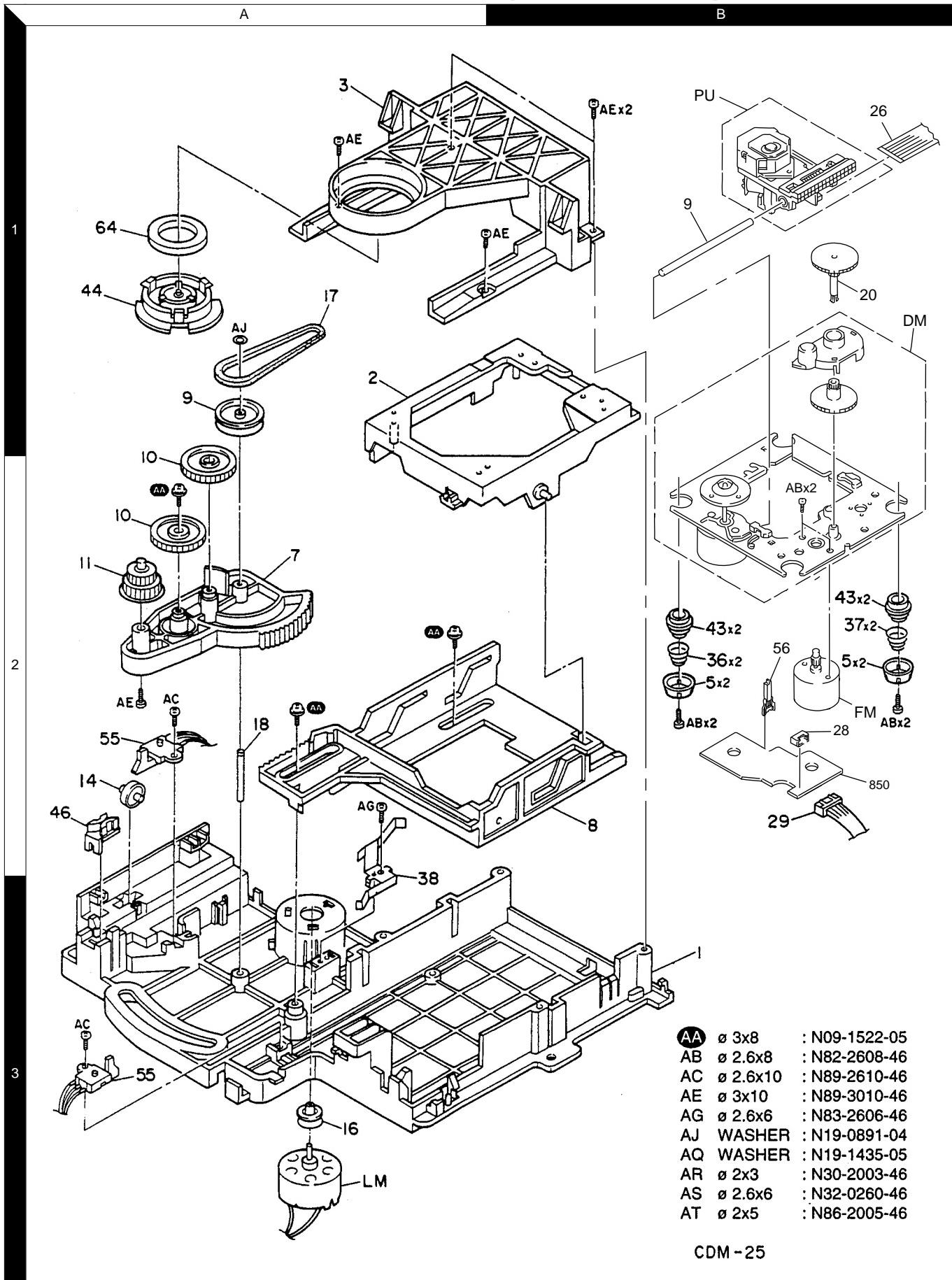
**CAUTION:** For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list).  $\Delta$  indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

The DC voltage is an actual reading measured with a high impedance type voltmeter. The measurement value may vary depending on the measuring instruments used or on the product. Refer to the voltage during PLAY unless otherwise specified; The value shown in ( ) is the voltage measured at the moment of STOP.

Y22-7540-10

**KENWOOD**

## EXPLODED VIEW (MECHANISM)

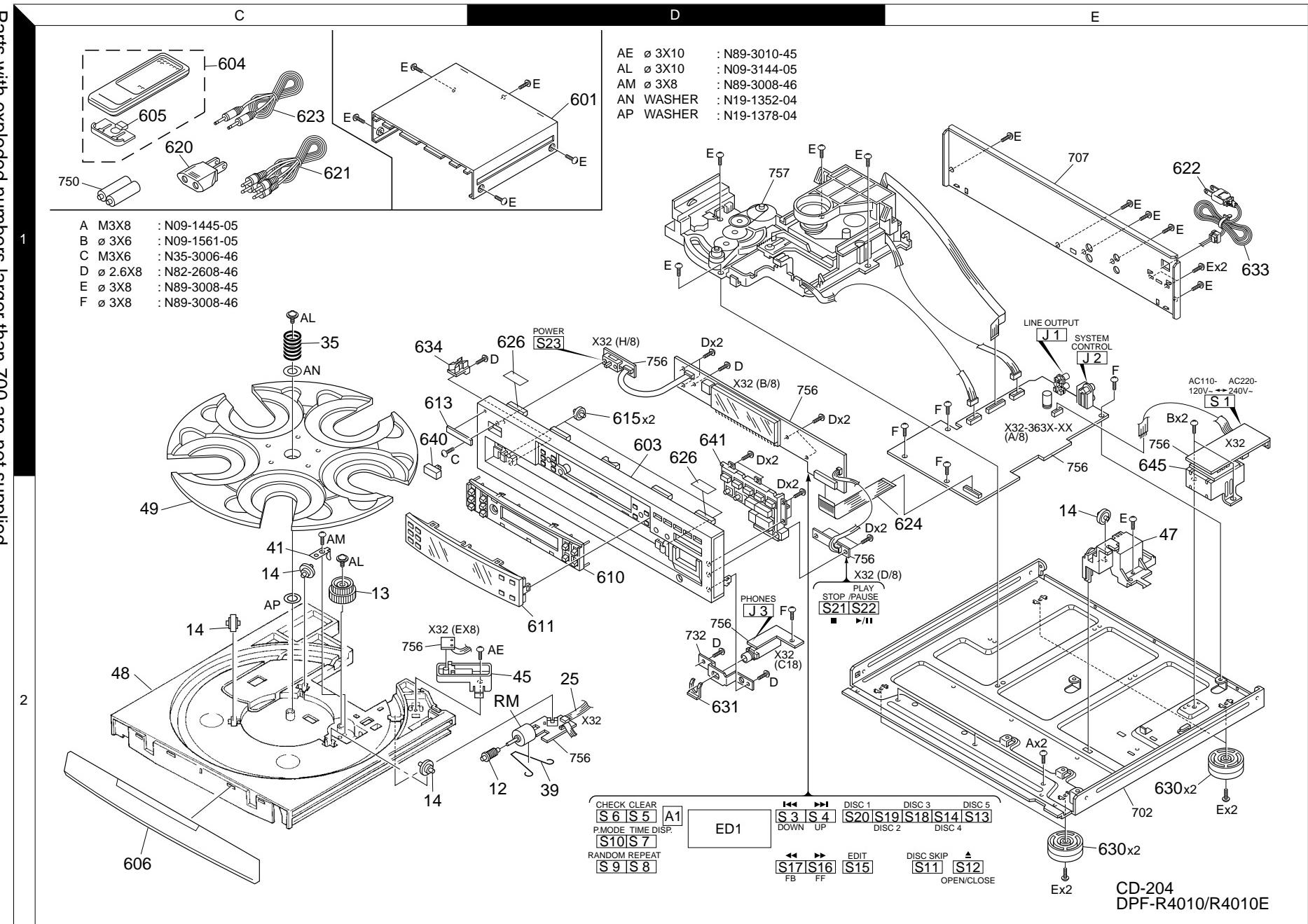


CDM - 25

# CD-203/204/DPF-R3010/R3010E/R4010/R4010E

## EXPLODED VIEW (UNIT)

Parts with exploded numbers larger than 700 are not supplied.



# PARTS LIST

②

\* New Parts  
 Parts without **Parts No.** are not supplied.  
 Les articles non mentionnés dans le **Parts No.** ne sont pas fournis.  
 Teile ohne **Parts No.** werden nicht geliefert.

①

Ref. No	Add- ress	New Parts	Parts No.	Description	Desti- nation	Re- marks	
<b>CD-203/DPF-R3010/3010E/CD-204/DPF-4010/4010E</b>							
-	-	-	B59-1104-00	SERVICE DIRECTORY	Y1		
-	-	*	B59-1104-00	SERVICE DIRECTORY	Y3		
-	-	*	B60-3684-00	INSTRUCTION MANUAL(ENGLISH)	E2		
-	-	*	B60-3684-00	INSTRUCTION MANUAL(ENGLISH)	E4		
-	-	*	B60-3684-00	INSTRUCTION MANUAL(ENGLISH)	K1P1Y1		
-	-	*	B60-3684-00	INSTRUCTION MANUAL(ENGLISH)	K3P3Y3		
-	-	*	B60-3684-00	INSTRUCTION MANUAL(ENGLISH)	M1X1T1		
-	-	*	B60-3684-00	INSTRUCTION MANUAL(ENGLISH)	M3X3T3		
-	-	*	B60-3685-00	INSTRUCTION MANUAL(FRENCH)	P1E1		
-	-	*	B60-3685-00	INSTRUCTION MANUAL(G,D,I)	P3E3		
-	-	*	B60-3686-00	INSTRUCTION MANUAL(G,D,I)	E1		
-	-	*	B60-3686-00	INSTRUCTION MANUAL(G,D,I)	E3		
-	-	*	B60-3687-00	INSTRUCTION MANUAL(SPANISH)	M1E1		
-	-	*	B60-3687-00	INSTRUCTION MANUAL(SPANISH)	M3E3		
-	-	*	B60-3688-00	INSTRUCTION MANUAL(TAIWANESE)	M1		
-	-	*	B60-3688-00	INSTRUCTION MANUAL(TAIWANESE)	M3		
-	-	*	B60-3969-00	INSTRUCTION MANUAL(PH)	E2E4		
-	-	*	B60-3970-00	INSTRUCTION MANUAL(R)	E2E4		
-	-	*	B60-3971-00	INSTRUCTION MANUAL(CZ)	E2E4		
-	-	*	B60-3972-00	INSTRUCTION MANUAL(HG)	E2E4		
615	1D		D14-0389-04	ROLLER			
△	620	1C	E03-0115-05	AC PLUG ADAPTER	M1		
△	620	1C	E03-0115-05	AC PLUG ADAPTER	M3		
△	621	1C	E30-0505-05	AUDIO CORD			
△	622	1E	E30-2787-05	AC POWER CORD	K1P1		
△	622	1E	E30-2787-05	AC POWER CORD	K3P3		
△	622	1E	E30-2788-05	AC POWER CORD	M1E1E2		
△	622	1E	E30-2788-05	AC POWER CORD	M3E3E4		
△	622	1E	E30-2789-05	AC POWER CORD	Y1		
△	622	1E	E30-2789-05	AC POWER CORD	Y3		
△	622	1E	E30-2790-05	AC POWER CORD	X1		
△	622	1E	E30-2790-05	AC POWER CORD	X3		
△	622	1E	E30-2791-05	AC POWER CORD	T1		
△	622	1E	E30-2791-05	AC POWER CORD	T3		
△	623	1C	E30-2816-05	CORD WITH PLUG			
△	624	2E	*	E35-2059-05	FLAT CABLE (37P)		
626	2D		G10-0444-04	NON-WOVEN FABRIC			
-	-	*	H10-7430-02	POLYSTYRENE FOAMED FIXTURE(L)	E2		
-	-	*	H10-7430-02	POLYSTYRENE FOAMED FIXTURE(L)	E4		
-	-	*	H10-7430-02	POLYSTYRENE FOAMED FIXTURE(L)	K1P1Y1		
-	-	*	H10-7430-02	POLYSTYRENE FOAMED FIXTURE(L)	K3P3Y3		
-	-	*	H10-7430-02	POLYSTYRENE FOAMED FIXTURE(L)	M1X1E1		
-	-	*	H10-7430-02	POLYSTYRENE FOAMED FIXTURE(L)	M3X3E3		
-	-	*	H10-7431-12	POLYSTYRENE FOAMED FIXTURE(R)	E2		
-	-	*	H10-7431-12	POLYSTYRENE FOAMED FIXTURE(R)	E4		
-	-	*	H10-7431-12	POLYSTYRENE FOAMED FIXTURE(R)	K1P1Y1		
-	-	*	H10-7431-12	POLYSTYRENE FOAMED FIXTURE(R)	K3P3Y3		
-	-	*	H10-7431-12	POLYSTYRENE FOAMED FIXTURE(R)	M1X1E1		
-	-	*	H10-7431-12	POLYSTYRENE FOAMED FIXTURE(R)	M3X3E3		
-	-	*	H10-7432-02	POLYSTYRENE FOAMED FIXTURE(L)	T1		
-	-	*	H10-7432-02	POLYSTYRENE FOAMED FIXTURE(L)	T3		
-	-	*	H10-7433-02	POLYSTYRENE FOAMED FIXTURE(R)	T1		

L : Scandinavia    K : USA    P : Canada    R : Mexico    C : China    I : Malaysia  
 Y : PX(Far East, Hawaii)    T : Europe    E : Europe    G : Germany    V : China (Shanghai)  
 Y : AAFFES(Europe)    X : Australia    Q : Russia    H : Korea    M : Other Areas

△ indicates safety critical components.

L : Scandinavia    K : USA    P : Canada    R : Mexico    C : China    I : Malaysia  
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△ indicates safety critical components.

# CD-203/204/DPF-R3010/R3010E/R4010/R4010E

## PARTS LIST

\* New Parts  
 Parts without **Parts No.** are not supplied.  
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Ref. No	Add- ress	New Parts	Parts No.	Description	Desti- nation	Re- marks
-			H10-7433-02	POLYSTYRENE FOAMED FIXTURE(R)	T3	
-			H12-2339-04	PACKING FIXTURE	X1	
-			H13-0152-14	CARTON BOARD	X3	
-			H13-0152-14	CARTON BOARD	T1	
-			H13-0163-04	CARTON BOARD	T3	
-			H13-0163-04	PROTECTION COVER	M1	
-			H20-0568-04	PROTECTION COVER	M3	
-			H20-0568-04	PROTECTION SHEET	E2	
-			H21-0303-04	PROTECTION BAG (235X350X0.03)	E4	
-			H25-0232-04	PROTECTION BAG (235X350X0.03)	K1P1Y1	
-			H25-0232-04	PROTECTION BAG (235X350X0.03)	K3P3Y3	
-			H25-0232-04	PROTECTION BAG (235X350X0.03)	M1X1E1	
-			H25-0232-04	PROTECTION BAG (235X350X0.03)	M3X3E3	
-			H25-0651-04	PROTECTION BAG (0232 PRINT)	T1	
-			H25-0651-04	PROTECTION BAG (0232 PRINT)	T3	
-			H25-0661-04	PROTECTION BAG	E2	
-			H25-0661-04	PROTECTION BAG	E4	
-			H25-0661-04	PROTECTION BAG	K1P1Y1	
-		*	H25-0661-04	PROTECTION BAG	K3P3Y3	
-		*	H25-0661-04	PROTECTION BAG	X1T1E1	
-		*	H25-0661-04	PROTECTION BAG	X3T3E3	
-		*	H25-0661-04	ITEM CARTON CASE	Y1X1E1	
-		*	H25-0661-04	ITEM CARTON CASE	M1	
-		*	H50-2776-04	ITEM CARTON CASE	C1	
-		*	H50-2776-04	ITEM CARTON CASE	C2	
-		*	H50-2776-04	ITEM CARTON CASE	C3	
-		*	H50-2776-04	ITEM CARTON CASE	C4	
-		*	H50-2776-04	ITEM CARTON CASE	C5	
-		*	H50-2777-04	ITEM CARTON CASE	CF92FV1H124J	
-		*	H50-2777-04	ITEM CARTON CASE	CC45FSL1H470J	
-		*	H50-2778-04	ITEM CARTON CASE	CE04LW1A101M	
-		*	H50-2779-04	ITEM CARTON CASE	C6	
-		*	H50-2780-04	ITEM CARTON CASE	C7 ,8	
-		*	H50-2781-04	ITEM CARTON CASE	C9	
-		*	H50-2782-04	ITEM CARTON CASE	C10	
-		*	H50-2783-04	ITEM CARTON CASE	C11	
-		*	H50-3069-04	ITEM CARTON CASE	C12	
-		*	H50-3070-04	ITEM CARTON CASE	C13	
-			J02-1167-03	FOOT	C14	
630	2E		J02-1167-03	FOOT	C15	
630	2E		J02-1167-03	FOOT	C16	
630	2E		J02-1167-03	FOOT	C17	
630	2E		J02-1167-03	FOOT	C18 ,19	
630	2E	*	J02-1405-03	FOOT (D=46,H=14.5,T)	C20	
630	2E	*	J02-1405-03	FOOT (D=46,H=14.5,T)	C21	
631	2D		J21-3326-05	JACK MOUNTING HARDWARE	C22	
631	2D		J21-3326-05	JACK MOUNTING HARDWARE	C23	
631	2D		J21-3326-05	JACK MOUNTING HARDWARE	C25	
633	1E		J42-0083-05	POWER CORD BUSHING	C26 ,27	
-			J90-0851-04	GUIDE	C28	
-			J61-0307-05	WIRE BAND	C29	
-			J61-0307-05	WIRE BAND	C30	
-			J61-0307-05	WIRE BAND	C31	
-			J61-0307-05	WIRE BAND	C32	
-			J61-0307-05	WIRE BAND	C33	
-			J61-0307-05	WIRE BAND	C34 ,35	
640	1C	*	K27-2258-04	KNOB (BUTTON) POWER	C36	
640	1C	*	K27-2258-04	KNOB (BUTTON) POWER	C37	
640	1C	*	K27-2295-04	KNOB (BUTTON) POWER	C38	
640	1C	*	K27-2295-04	KNOB (BUTTON) POWER	C39	
640	1C	*	K27-2295-04	KNOB (BUTTON) POWER	C40 ,41	
640	1C	*	K27-2295-04	KNOB (BUTTON) POWER	C42	
640	1C	*	K27-2295-04	KNOB (BUTTON) POWER	C43	
640	1C	*	K27-2295-04	KNOB (BUTTON) POWER	C44	
640	1C	*	K27-2295-04	KNOB (BUTTON) POWER	C45 ,46	

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Ref. No	Add- ress	New Parts	Parts No.	Description	Desti- nation	Re- marks
641		1D	*	K29-6908-02	KNOB	K1P1Y1
641		1D	*	K29-6908-02	KNOB	K3P3Y3
641		1D	*	K29-7331-02	KNOB	E1E2
641		1D	*	K29-7331-02	KNOB	E3E4
641		1D	*	K29-7331-02	KNOB	M1X1T1
641		1D	*	K29-7331-02	KNOB	M3X3T3
△ 645		1E	L07-2297-05	POWER TRANSFORMER	K1P1	
△ 645		1E	L07-2297-05	POWER TRANSFORMER	K3P3	
△ 645		1E	L07-2298-05	POWER TRANSFORMER	E2	
△ 645		1E	L07-2298-05	POWER TRANSFORMER	E4	
△ 645		1E	L07-2298-05	POWER TRANSFORMER	X1T1E1	
△ 645		1E	L07-2298-05	POWER TRANSFORMER	X3T3E3	
△ 645		1E	L07-2299-05	POWER TRANSFORMER	Y1M1	
△ 645		1E	L07-2299-05	POWER TRANSFORMER	Y3M3	
<b>CD PLAYER UNIT (X32-363X-XX)</b>						
C1			CK45FF1H103Z	CERAMIC	0.010UF	Z
C2			CK45FF1H473Z	CERAMIC	0.047UF	Z
C3			CF92FV1H124J	MF-C	0.12UF	J
C4			CC45FSL1H470J	CERAMIC	47PF	J
C5			CE04LW1A101M	ELECTRO	100UF	10WV
C6			CF92FV1H124J	MF-C	0.12UF	J
C7 ,8			CQ93FMG1H104J	MYLAR	0.10UF	J
C9			CK45FF1H473Z	CERAMIC	0.047UF	Z
C10			CC45FSL1H221J	CERAMIC	220PF	J
C11			CK45FB1H102K	CERAMIC	1000PF	K
C12			CE04LW1C100M	ELECTRO	10UF	16WV
C13			CQ93FMG1H393J	MYLAR	0.039UF	J
C14			CK45FF1H103Z	CERAMIC	0.010UF	Z
C15			CC45FSL1H151J	CERAMIC	150PF	J
C16			CE04HW1E100M	NP-ELEC	10UF	25WV
C17			CK45FB1H102K	CERAMIC	1000PF	K
C18 ,19			CK45FF1H103Z	CERAMIC	0.010UF	Z
C20			CF92FV1H180J	MYLAR	0.033UF	J
C21			CK45FF1H103Z	CERAMIC	0.010UF	Z
C22			CK45FB1H222K	CERAMIC	2200PF	K
C23			CK45FF1H103Z	CERAMIC	0.010UF	Z
C25			CC45FSL1H180J	CERAMIC	18PF	J
C26 ,27			CE04LW1A101M	ELECTRO	100UF	10WV
C28			CQ93FMG1H333J	MYLAR	0.033UF	J
C29			CQ93FMG1H473J	MYLAR	0.047UF	J
C30			CK45FB1H152K	CERAMIC	1500PF	K
C31			CK45FF1H103Z	CERAMIC	0.010UF	Z
C32			CK45FB1H332K	CERAMIC	3300PF	K
C33			CF92FV1H124J	MF-C	0.12UF	J
C34 ,35			CK45FB1H102K	CERAMIC	1000PF	K
C36			CK45FF1H103Z	CERAMIC	0.010UF	Z
C37			CE04LW1A101M	ELECTRO	100UF	10WV
C38			CK45FF1H103Z	CERAMIC	0.010UF	Z
C39			CE04LW1A101M	ELECTRO	100UF	10WV
C40 ,41			CQ93FMG1H473J	MYLAR	0.047UF	J
C42			CE04LW0J331M	ELECTRO	330UF	6.3WV
C43			CK45FF1H223Z	CERAMIC	0.022UF	Z
C44			CC45FSL1H220J	CERAMIC	22PF	J
C45 ,46			CE04LW1A101M	ELECTRO	100UF	10WV

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C47 ,48			CC93FMG1H821J	MYLAR 820PF J		
C49 ,50			CQ93FMG1H162J	MYLAR 1600PF J		
C51 ,52			CE04LW1C470M	ELECTRO 47UF 16WV		
C53 ,54			CQ93FMG1H821J	MYLAR 820PF J		
C55			CE04LW1A101M	ELECTRO 100UF 10WV		
C56			CK45FF1H103Z	CERAMIC 0.010UF Z		
C57			CK45FF1H103Z	CERAMIC 0.010UF Z	E1E2	
C57			CK45FF1H103Z	CERAMIC 0.010UF Z	K1P1Y1	
C57			CK45FF1H103Z	CERAMIC 0.010UF Z	M1X1T1	
C58			CK45FF1H103Z	CERAMIC 0.010UF Z		
C59 ,60			CE04LW1H2R2M	ELECTRO 2.2UF 50WV	E1E2	
C59 ,60			CE04LW1H2R2M	ELECTRO 2.2UF 50WV	K1P1Y1	
C59 ,60			CE04LW1H2R2M	ELECTRO 2.2UF 50WV	M1X1T1	
C61 ,62			CE04LW0J221M	ELECTRO 220UF 6.3WV	E1E2	
C61 ,62			CE04LW0J221M	ELECTRO 220UF 6.3WV	K1P1Y1	
C61 ,62			CE04LW0J221M	ELECTRO 220UF 6.3WV	M1X1T1	
C63			CK45FF1H473Z	CERAMIC 0.047UF Z		
C65 ,66			CK45FF1H103Z	CERAMIC 0.010UF Z		
C67			CC45FSL1H101J	CERAMIC 100PF J		
C68 ,69			CK45FF1H103Z	CERAMIC 0.010UF Z		
C70			CE04LW1C222M	ELECTRO 2200UF 16WV		
C71			CE04LW1H221M	ELECTRO 2200UF 16WV		
C72			CK45FF1H103Z	CERAMIC 0.010UF Z		
C73			CE04LW1H100M	ELECTRO 10UF 50WV		
C74			CE04LW1A101M	ELECTRO 100UF 10WV		
C75			CE04LW1H4R7M	ELECTRO 4.7UF 50WV		
C76			CC93FMG1H473J	MYLAR 0.047UF J		
C77 ,78			CC45FSL1H221J	CERAMIC 220PF J		
C79			CK45FF1H103Z	CERAMIC 0.010UF Z		
C80			CK45FF1H223Z	CERAMIC 0.022UF Z		
C81			CE04LW1C101M	ELECTRO 100UF 16WV		
C82 ,83			CQ93FMG1H471J	MYLAR 470PF J	E1E2	
C82 ,83			CQ93FMG1H471J	MYLAR 470PF J	K1P1Y1	
C82 ,83			CK45FF1H103Z	CERAMIC 0.010UF Z	M1X1T1	
C84 ,85			CK45FF1H103Z	CERAMIC 0.010UF Z		
C86			CE04LW1A101M	ELECTRO 100UF 10WV		
C87			CC45FSL1H101J	CERAMIC 100PF J		
C88			CK45FF1H473Z	CERAMIC 0.047UF Z		
C89			CK45FF1H103Z	CERAMIC 0.010UF Z		
C96			CQ93FMG1H104J	MYLAR 0.10UF J		
C99			CK45FF1H103Z	CERAMIC 0.010UF Z		
C100			CC45FSL1H101J	CERAMIC 100PF J		
C106			CK45FF1H473Z	CERAMIC 0.047UF Z		
C109,110			CK45FF1H103Z	CERAMIC 0.010UF Z	E1E2	
C109,110			CK45FF1H103Z	CERAMIC 0.010UF Z	K1P1Y1	
C113			CK45FF1H103Z	CERAMIC 0.010UF Z	M1X1T1	
C114			CE04LW1C101M	ELECTRO 1000UF 16WV		
C117			CE04LW1C331M	ELECTRO 330UF 16WV	E1E2	
C117			CE04LW1C331M	ELECTRO 330UF 16WV	K1P1Y1	
C118			CE45FF1H103Z	CERAMIC 0.010UF Z	M1X1T1	
C119			CE04LW1A101M	ELECTRO 100UF 10WV		
C120			CE04LW1C221M	ELECTRO 220UF 16WV		
C121			CK45FF1H103Z	CERAMIC 0.010UF Z		

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Ref. No	Address	New Parts	Parts No.	Description	Desti-nation	Re-marks
C201			CK45FF1H103Z	CERAMIC 0.010UF Z		
C202			CE04LW1A101M	ELECTRO 100UF 10WV	E1E2	
C202			CE04LW1A101M	ELECTRO 100UF 10WV	K1P1Y1	
C202			CE04LW1A101M	ELECTRO 100UF 10WV	M1X1T1	
CN1			E40-8037-05	FLAT CABLE CONNECTOR		
CN2			E40-4876-05	PIN ASSY		
CN3			E40-3250-05	PIN ASSY		
CN4			E40-3252-05	PIN ASSY		
CN5			E40-4932-05	FLAT CABLE CONNECTOR		
CN7			E40-4245-05	PIN ASSY		
CN8			E40-4924-05	FLAT CABLE CONNECTOR		
CN9			E40-4962-05	FLAT CABLE CONNECTOR		
CN10			E40-4932-05	FLAT CABLE CONNECTOR		
J1			E63-0122-05	PHONO JACK		
J2			E11-0293-05	MINIATURE PHONE JACK(2P)		
J3			E11-0272-05	PHONE JACK	E1E2	
J3			E11-0272-05	PHONE JACK	K1P1Y1	
J3			E11-0272-05	PHONE JACK	M1X1T1	
-			J19-3647-14	HOLDER		
E11			J11-0808-05	WIRE CLAMPER		
E12			J11-0808-05	WIRE CLAMPER	E1E2	
E12			J11-0808-05	WIRE CLAMPER	K1P1Y1	
E12			J11-0808-05	WIRE CLAMPER	M1X1T1	
E13			J11-0808-05	WIRE CLAMPER		
L1			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)		
L2 ,3			L40-1091-17	SMALL FIXED INDUCTOR	E1E2	
L2 ,3			L40-1091-17	SMALL FIXED INDUCTOR	K1P1Y1	
L2 ,3			L40-1091-17	SMALL FIXED INDUCTOR	M1X1T1	
L4 ,6			L92-0018-05	FERRITE CORE		
L7			L92-0017-05	FERRITE CORE		
X1			L78-0299-05	RESONATOR (16.93M)		
△ R111			RD14NB2E101J	RD	100 J 1/4W	
△ R131,132			RS14KB3D181J	FL-PROOF RS	180 J 2W	
R142			RS14KB3A101J	FL-PROOF RS	100 J 1W	
△ R165			RD14NB2E1R0J	RD	1 J 1/4W	
△ R168			RD14NB2E101J	RD	100 J 1/4W	
△ R170			RD14NB2E1R0J	RD	1 J 1/4W	
△ R171-173			RS14KB3D181J	FL-PROOF RS	180 J 2W	
△ R174			RD14NB2E101J	RD	100 J 1/4W	
VR1			R12-3687-05	TRIMMING POT.(33K)		
VR2			R12-5651-05	TRIMMING POT.(100K)		
VR3			R12-3687-05	TRIMMING POT.(33K)		
△ S1			S31-2131-05	SLIDE SWITCH (POWER TYPE)		
△ S1			S31-2131-05	SLIDE SWITCH (POWER TYPE)	Y1M1	
S2			S31-2132-05	SLIDE SWITCH	Y3M3	
S3 ,22			S70-0031-05	TACT SWITCH		
S23			S40-2351-05	PUSH SWITCH		
PH1			T95-0145-05	OPTO ISOLATOR		
D1 ,10			HSS104	DIODE		
D1 ,10			1SS133	DIODE		
D13			D3SBA20F03	DIODE		
D14			S5688B	DIODE		

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Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
Q12			UN4112	DIGITAL TRANSISTOR		
Q13			2SA992(F,E)	TRANSISTOR		
Q14			2SD2012	TRANSISTOR		
A1			W02-2537-05	ELECTRIC CIRCUIT MODULE	E1E2	
A1			W02-2537-05	ELECTRIC CIRCUIT MODULE	K1P1Y1	
A1			W02-2537-05	ELECTRIC CIRCUIT MODULE	M1X1T1	
<b>MECHANISM ASSY (X92-2100-21/X92-2120-10)</b>						
1	3B	*	A10-3360-01	CHASSIS		
2	1A	*	A11-1126-02	SUB CHASSIS		
3	1A	*	A11-1127-12	SUB CHASSIS		
5	2B	*	B09-0255-04	CAP		
7	2A	*	D10-3740-13	ARM		
8	2B	*	D10-3741-02	SLIDER		
9	1B	*	D13-1829-04	GEAR		
10	2A	*	D13-1830-14	GEAR		
11	2A	*	D13-1831-04	GEAR		
12	2D	*	D13-1833-04	WORM		
13	2C	*	D13-1832-04	GEAR		
14	2C,2E	*	D14-0389-04	ROLLER		
16	2A	*	D15-0407-04	MOTOR PULLEY		
17	1A	*	D16-0355-03	BELT		
18	2A		D21-1763-14	SHAFT		
19	1B		D10-3606-08	ROD		
20	1B		D13-1720-08	GEAR		
25	3D		E35-0747-25	FLAT CABLE (7P)		
26	1D		E35-1317-05	FLAT CABLE (16P)		
28	2B		E40-3264-05	PIN ASSY		
29	2B		E35-1669-05	WIRING HARNESS		
35	2C		G01-3630-14	COMPRESSION SPRING		
36	2B		G01-3753-04	COMPRESSION SPRING		
37	2B		G01-3754-04	COMPRESSION SPRING		
38	3A		G02-1049-04	FLAT SPRING		
39	3D		G09-0634-04	WIRE SPRING		
41	2D	*	G02-1631-04	FLAT SPRING		
-			G10-0146-04	NON-WOVEN FABRIC		
43	2B		J02-1121-04	INSULATOR		
44	1A		J11-0830-03	CLAMPER		
45	3D	*	J19-5818-04	HOLDER		
46	2A	*	J90-0851-04	GUIDE		
47	2E	*	J90-0852-02	GUIDE		
48	3C	*	J99-0801-01	TRAY		
49	2C	*	J99-0596-01	TRAY		
55	2A,3A		S33-2061-05	LEVER SWITCH		
56	2B		S74-0038-08	LEAF SWITCH		
64	1A		T99-0544-15	MAGNET		
DM	1B		A11-1082-08	DISC MOTOR ASSY		
FM	2B		T42-0817-08	FEED MOTOR		
LM	3A		T42-0524-05	DC MOTOR		
PU	1B		T25-0055-08	OPTICAL PICKUP HEAD		
RM	3D		T42-0670-15	DC MOTOR		

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D14			1SR139-400	DIODE		
D15			MTZJ30(B)	ZENER DIODE		
D15			UZ-30BS	ZENER DIODE		
D16			MTZJ5.6(B)	ZENER DIODE		
D16			UZ-5.6BSB	ZENER DIODE		
D17			MTZJ4.7(B)	ZENER DIODE		
D17			UZ-4.7BSB	ZENER DIODE		
D18			MTZJ5.6(B)	ZENER DIODE		
D18			UZ-5.6BSB	ZENER DIODE		
D19 -22			HSS104	DIODE		
D19 -22			1SS133	DIODE		
D23			MTZJ8.2(B)	ZENER DIODE		
D23			UZ-8.2BSB	ZENER DIODE		
D26			MTZJ10(B)	ZENER DIODE		
D26			UZ-10BSB	ZENER DIODE		
D28			HSS104	DIODE		
D28			1SS133	DIODE		
D201-206			HSS104	DIODE		
D201-206			1SS133	DIODE		
D207			HSS104	DIODE	E3E4	
D207			HSS104	DIODE	K3P3Y3	
D207			1SS133	DIODE	M3X3T3	
D207			1SS133	DIODE	E3E4	
D207			1SS133	DIODE	K3P3Y3	
D207			1SS133	DIODE	M3X3T3	
D208			SIR-33ST3	INFRARED LED		
ED1			10-BT-131GK	INDICATOR TUBE		
IC1			CXA1782BQ*1	ANALOGUE IC		
IC2			CXD2507AQ*1	MOS-IC		
IC3			UPD78044FGF023	MI-COM IC		
IC4			LA6541D	ANALOGUE IC		
IC5			TC9293AF	MOS-IC		
IC6			ICP-N20	ANALOGUE IC	T1E1E2	
IC6			ICP-N20	ANALOGUE IC	T3E3E4	
IC6			ICP-N20	ANALOGUE IC	Y1M1X1	
IC6			ICP-N20	ANALOGUE IC	Y3M3X3	
IC7			NJM4580D	ANALOGUE IC		
IC7			NJM4580D	IC(OP AMP X2)	E1E2	
IC7			NJM4580D	IC(OP AMP X2)	K1P1Y1	
IC7			NJM4580D	IC(OP AMP X2)	M1T1X1	
IC8 ,9			TA8409S	MOS-IC		
IC12			NJM4565D	ANALOGUE IC		
PH2			RPT-38PT3F	PHOTO TRANSISTOR		
Q1			2SC1740S(Q,R)	TRANSISTOR		
Q1			2SC2785(F,E)	TRANSISTOR		
Q2			DTA124ESA	DIGITAL TRANSISTOR		
Q2			UN4112	DIGITAL TRANSISTOR		
Q3			2SA954(L,K)	TRANSISTOR		
Q4 ,5			DTC113ZSA	DIGITAL TRANSISTOR		
Q4 ,5			UN4219	DIGITAL TRANSISTOR		
Q6			DTC124ESA	DIGITAL TRANSISTOR		
Q7 ,8			UN4212	DIGITAL TRANSISTOR		
Q9			2SC2878(B)	TRANSISTOR		
Q10			2SD2012	TRANSISTOR		
Q12			2SA1534A	TRANSISTOR		
Q12			DTA124ESA	DIGITAL TRANSISTOR		

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CD-203/204/DPF-R3010/R3010E/R4010/R4010E

## SPECIFICATIONS

### CD-204/203/DPF-R4010/3010

#### [ Format ]

System ..... Compact disc digital audio system  
Laser ..... Semiconductor laser

#### [ D/A Convertors ]

D/A Conversion ..... 1 Bit  
Oversampling ..... 8 fs (352.8 kHz)

#### [ Audio ]

Frequency response ..... 4 Hz – 20 kHz, ±0.5 dB

Signal to noise ratio ..... More than 95 dB

Dynamic range ..... More than 95 dB

Total harmonic distortion + noise ..... Less than 0.008% (at 1 kHz)

Wow & flutter ..... Unmeasurable Limit

Output level/impedance

Fixed (CD-203/DPF-R3010) ..... 2 V/0.8 kΩ

Variable (CD-204/DPF-R4010) ..... (Max.) 2 V/0.3 kΩ

Headphone output (Max.)

(CD-204/DPF-R4010 only) ..... 20 mW (32 Ω)

#### [ General ]

Power consumption ..... 13 W

Dimensions ..... W: 440 mm (17-5/16")

H : 125 mm (4-15/16")

D : 397 mm (15-5/8")

Weight (Net) ..... 5.0 kg (11.0 lb)



1. KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.
2. The full performance may not be exhibited in an extremely cold location (under a water-freezing temperature).

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#### Note:

Component and circuit are subject to modification to insure best operation under differing local conditions. This manual is based on Europe (E) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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